

PROJECT

FINE 1

Future Improvement for Energy and Noise

Funding: European (Horizon 2020)

Duration: Sep 2016 - Oct 2019

Status: Complete

Total project cost: €1,340,880

EU contribution: €1,340,880



Call for proposal: H2020-S2RJU-CFM-2015-01-1

[CORDIS RCN : 205671](#)

Objectives:

The FINE 1 project aims to reduce the operational costs of railways by lowering the energy use and noise associated with rail traffic. The project results are expected to enable an increase of traffic in Europe and to enhance the attractiveness of railways in relation to other modes of transport.

The project activities support the innovation process within the S2R Technical Demonstrators (TDs) by providing the methodology and know-how to enable the development of low noise and low energy TDs. The project is fully in line with EU objectives with eight technical work packages (WPs) that address technologies to support these objectives.

The reduction of energy use for rail vehicles is as addressed in WP3 and WP4 and will indirectly lead to reduced green-house gas emissions, as with most rail transport powered with electricity. In addition, reducing energy use will lower the life cycle cost and the costs of vehicle operation.

The project also aims to develop practical methods for predicting noise and vibration performance for rolling stock, the infrastructure and its environment. The prediction of interior vehicle noise is addressed in WP7 and source modelling for interior and exterior noise in WP8. With accurate characterisation of each contributing source, it will be possible to optimise cost benefit scenarios, as addressed in WP6, while taking into account exposure and comfort.

Finally, the auralisation and visualisation techniques of traffic noise scenarios and the noise control techniques developed in WP9 support the reduction of noise exposure for residents through efficient traffic planning and novel mitigation techniques.

In summary, the expected FINE 1 advances in noise modelling and control, energy management and control methodology, will improve the competitiveness of the European railway system compared to other modes of transportation, thereby promoting a modal shift to rail.

Parent Programmes:

[H2020-EU.3.4. - Horizon 2020: Smart, Green and Integrated Transport](#)
[Shift2Rail - Shift2Rail](#)

Institute type: Public institution

Institute name: European Commission

Funding type: Public (EU)

Partners:

DEUTSCHE BAHN AG - Germany

Construcciones y Auxiliar de Ferrocarriles Investigación y Desarrollo, S.L. - Spain

ALSTOM TRANSPORT SA - France

SIEMENS AKTIENGESELLSCHAFT OESTERREICH - Austria

DEUTSCHES ZENTRUM FUER LUFT - UND RAUMFAHRT EV - Germany

PATENTES TALGO SL - Spain

SNCF - France

TRAFIKVERKET - TRV - Sweden

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Technologies:

""""""Rail technology, noise simulation and mitigation for reduced vibration""""""

Development phase: Research/Invention

STRIA Roadmaps: Vehicle design and manufacturing

Transport mode: Rail transport

Transport sectors: Passenger transport, Freight transport

Transport policies: Other specified

Geo-spatial type: Other